

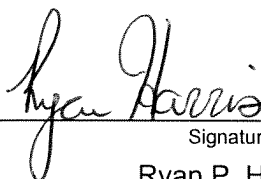
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PRE-APPEAL BRIEF REQUEST FOR REVIEW		Docket Number (Optional)	
		KCX-665 (19232)	
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	10/686,933	October 16, 2003	
	First Named Inventor		
	John Gavin MacDonald		
	Art Unit	Examiner	
	1618	Eric E. Silverman	
<p>Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.</p> <p>This request is being filed with a notice of appeal.</p> <p>The review is requested for the reason(s) stated on the attached sheet(s). Note: No more than five (5) pages may be provided.</p> <p>I am the</p> <p><input type="checkbox"/> applicant/inventor.</p> <p><input type="checkbox"/> assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)</p> <p><input type="checkbox"/> attorney or agent of record. Registration number _____</p> <p><input checked="" type="checkbox"/> attorney or agent acting under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34 <u>58,662</u></p> <p>NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.</p>			
<p><input checked="" type="checkbox"/> *Total of <u>1</u> forms are submitted.</p>			


Signature

Ryan P. Harris

Typed or printed name

864-271-1592

Telephone number

May 27, 2008

Date

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PATENT
ATTORNEY DOCKET NO: KCX-665 (19232)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application: MacDonald et al.)	Examiner: Eric E. Silverman
)	
Serial No: 10/686,933)	Group Art Unit: 1618
)	
Filed: October 16, 2003)	Deposit Account No: 04-1403
)	
Confirmation No: 4589)	Customer No: 22827
)	
Title: Method for Reducing Odor Using)	
Colloidal Nanoparticles)	

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Dear Sir:

In conjunction with the filing of a Notice of Appeal, Applicants respectfully request review of the basis of the rejections of the pending claims of the above-captioned application. A Final Office Action dated February 27, 2008 has been issued.

Claims 31, 35-48, and 50-53 are currently pending in the present application, including independent claim 31. Independent claim 31 is directed to a substrate for reducing odor. The substrate is porous and comprises a nonwoven, woven, or paper web. The substrate contains colloidal silica nanoparticles configured to adsorb one or more odorous compounds. The silica nanoparticles have an average size of from about 1 to about 50 nanometers and a surface area of from about 50 to about 1000 square meters per gram. Further, the silica nanoparticles are relatively nonporous and thus have a pore volume of less than about 0.4 milliliters per gram. Without intending to be limited by theory, the present inventors believe that the solid nature, i.e., low pore volume, of the colloidal nanoparticles may enhance the uniformity and stability of the nanoparticles, without sacrificing its odor adsorption characteristics.

I. Independent claims 31 is patentable over Honda, et al.

In the Final Office Action, independent claim 31 was rejected under *35 U.S.C. § 102(b)* as being anticipated by EP1188854 to Honda, et al. Honda, et al. is directed to a photocatalyst; specifically, a complex oxide containing titanium and silicon. Applicants respectfully submit, however, that Honda, et al. fails to disclose various aspects of independent claim 31. Particularly, Applicants submit that Honda, et al. is not “configured to adsorb one or more odorous compounds” nor does Honda, et al. disclose colloidal silica nanoparticles as required by independent claim 31.

Honda, et al. discloses that the invention’s primary function is to decompose malodorous compounds rather than adsorb them:

There are also known deodorants which utilize physical adsorption, such as active carbon and silica. **However, with these, the malodorous compounds are adsorbed and not decomposed, so they do not fundamentally resolve the situation.** Ideally, it is necessary that malodorous compounds be completely decomposed to odorless components. pg. 2, ¶ [0005], ll. 30-32.

Honda, et al. gives further reasons why the invention is not configured to adsorb odorous compounds:

In the case of fibre structures which have been subjected to such deodorant processing, **the adsorbed components may themselves give rise to a bad smell** or the malodorous components may be changed by decomposition into other components which themselves produce a strange smell. pg. 2, ¶ [0007], ll. 44-46.

Honda, et al. utilizes a photocatalyst in order to decompose odorous compounds rather than being configured to adsorb them as claim 31 requires.

Furthermore, claim 31 includes the limitation that the substrate contains colloidal silica nanoparticles. Honda, et al. does not disclose the use of silica nanoparticles. Specifically, Honda, et al. utilizes a complex oxide of silica and titanium yielding characteristics wholly different than the claimed colloidal silica nanoparticles. For instance Honda, et al. states:

In other words, the complex oxides of titanium and silicon are not simple mixtures of titanium oxide and silicon oxide, but are recognized as exhibiting characteristic properties **due to the fact that the titanium and silicon form a so-called binary oxide**. Furthermore, the results of X-ray diffraction analysis have

shown that this composite oxide has a non-crystalline or essentially non-crystalline microstructure. pg. 3, ¶ [0016], ll. 42-46.

As such, Honda, et al. cannot be said to anticipate a substrate containing colloidal silica nanoparticles.

Additionally, as the Office Action correctly indicates, Honda, et al. does not disclose the limitation that the silica nanoparticles are relatively nonporous and thus have a pore volume of less than about 0.4 milliliters per gram as required by independent claim 31. However, the Office Action found this claimed feature to be inherently disclosed in Honda, et al. Applicants respectfully disagree. As discussed above, Honda, et al. specifically discloses that the complex oxide of titanium and silicon exhibits properties wholly different from a simple mixture of silicon and titanium particles. Thus, Applicants submit that simply because the complex titanium-silicon oxide of Honda, et al. may yield particles of similar size and surface area, it is improper to conclude that these particles inherently disclose a property (i.e., pore volume) that is the same as the claimed silica nanoparticles.

II. Dependent claim 53 is patentable over Honda, et al.

In the Final Office Action, dependent claim 53 was also rejected under 35 U.S.C. § 102(b) as being anticipated by Honda, et al. In addition to the limitations absent from Honda, et al. argued above with respect to independent claim 31, dependent claim 53 contains additional limitations that are not disclosed by Honda, et al. Specifically, dependent claim 53 adds the limitation that the colloidal silica nanoparticles consist essentially of silica or alumina coated silica. The transitional phrase “consisting essentially of” limits the scope of a claim to the specified materials or steps “and those that do not materially affect the basic and novel characteristic(s)” of the claimed invention. *In re Herz*, 537 F.2d 549, 551-52, 190 USPQ 461, 463 (CCPA 1976) (emphasis in original).

In rejecting dependent claim 53, the Final Office Action noted “there is no reason to believe that the addition of titanium would interfere with (adsorption of odor); as such, the Honda particles are not excluded by the “consisting essentially of” language.” Applicants respectfully disagree. As noted above, Honda, et al. discloses that “the complex oxides of titanium and silicon are not simple mixtures of titanium oxide and silicon oxide, but are recognized as exhibiting characteristic properties due to the fact that the titanium and silicon

form a so-called binary oxide.” pg. 3, ¶ [0016], ll. 42-46. Indeed, the structure of Honda, et al. is a photocatalyst that, rather than adsorb odors, **decomposes** them.

Thus, it is Applicants’ first position that Honda, et al. fails to even disclose colloidal silica nanoparticles as claimed in independent claim 31. Furthermore, it is Applicants second position that, even if the disclosure of Honda, et al. discloses colloidal silica nanoparticles, the addition of the other components (ie. titanium complex) clearly materially affects the basic characteristics of Applicants’ claimed invention since the addition of these components converts the structure from an odor absorber to an odor decomposer.

III. Dependent claims 35-48, and 50-53 are patentable

Dependent claims 35-42, 49, and 50 were also rejected under *35 U.S.C. § 102(b)* as being anticipated by Honda, et al. However, for at least the reasons noted above relating to independent claim 31, dependent claims 35-42, 49, and 50 patentably define over Honda, et al.

Dependent claim 43 was rejected under *35 U.S.C. § 103(a)* as being unpatentable over Honda, et al. For at least the reasons indicated above relating to independent claim 31, Applicants submit that dependent claim 43 patentably defines over Honda, et al.

Dependent claims 44, 45, 46, 51, and 52 were rejected under *35 U.S.C. § 103(a)* as being unpatentable over Honda, et al. in view of WO 03/025067 to Beaverton. Applicants submit that Beaverton does not remedy the limitations of Honda, et al. as discussed above relating to independent claim 31. Thus, for at least the reasons indicated above relating to independent claim 31, Applicants submit that dependent claims 44, 45, 46, 51, and 52 patentably define over Honda, et al. in view of Beaverton.

Dependent claim 47 was rejected under *35 U.S.C. § 103(a)* as being unpatentable over Honda, et al. in view of U.S. 5,762,643 to Ray, et al. Applicants submit that Ray, et al. does not remedy the limitations of Honda, et al. as discussed above relating to independent claim 31. Thus, for at least the reasons indicated above relating to independent claim 31, Applicants submit that dependent claim 47 patentably defines over Honda, et al. in view of Ray, et al.

Additionally, previous dependent claim 49 was rejected under *35 U.S.C. § 103(a)* as being unpatentable over Honda, et al. in view of U.S. Patent Application Publication 2002/0006425 to Takaoa, et al. Applicants have cancelled previous dependent claim 49.

In addition to the rejection noted above, various claims were also provisionally rejected under the judicially created doctrine of obvious-type double patenting in view of pending U.S. Application Serial No. 10/686,938. Additionally, claims 31, 43, 49, and 50 were rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-35 of U.S. Patent No. 7,141,518. To the extent necessary, Applicants agree to submit terminal disclaimers for both references at such time that the application is otherwise in condition for allowance.

Applicants respectfully submit that the present application is in complete condition for allowance and favorable action, therefore, is respectfully requested. Examiner Silverman is invited and encouraged to telephone the undersigned, however, should any issues remain after consideration of this Pre-Appeal Brief Request for Review.

Please charge any additional fees required by this Response to Deposit Account No. 04-1403.

Respectfully requested,

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